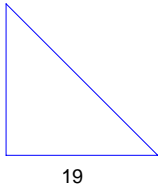


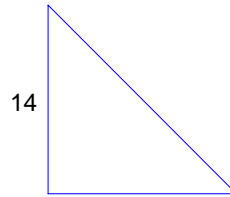
Geometry 9.4 Notes: Special Right Triangles (pp 551-3)

Isosceles Right Triangles: Find the missing sides of the isosceles right triangle. Write each answer in simplified form.

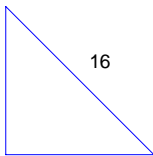
1.



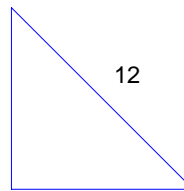
2.



3.



4.



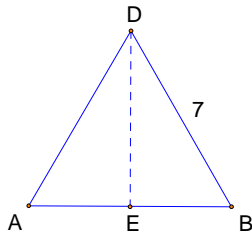
5. How do you find hypotenuse of an isosceles right triangle if you know a leg?

6. How do you find the leg of an isosceles right triangle if know the hypotenuse?

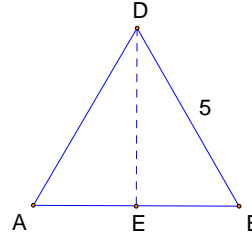
Geometry 9.4 Notes: Special Right Triangles (pp 551-3)

Equilateral triangles. Write all answers as simplified radicals.

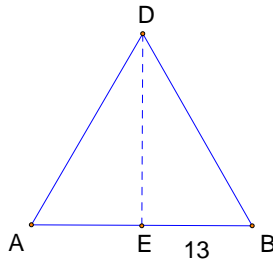
7. If $BD = 7$, find DE & BE .



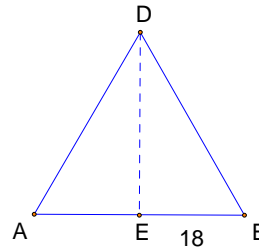
8. If $BD = 5$, find DE & BE .



9. If $BE = 13$, find DE & BD .



10. If $BE = 18$, find DE & BD .



11. What is $m\angle B$?

12. What is $m\angle BDE$?

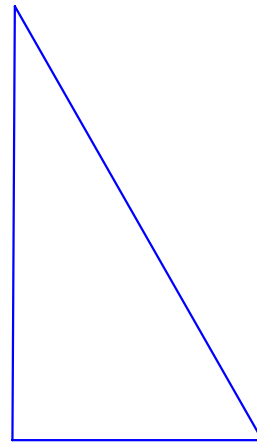
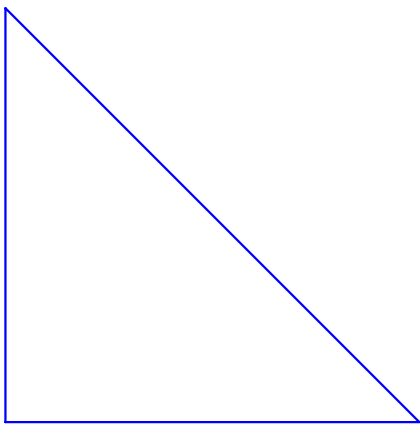
13. If you know the length of the side opposite the 30° angle, how do you find the length of the other two sides?

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(pp 551-3)

9.4 Notes: Special Right Triangles

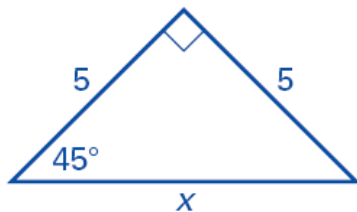
14. If you know the length of the hypotenuse, how do you find the lengths of the other two sides?

15. If you know the length of the side opposite the 60° angle, how do you find the length of the other two sides?

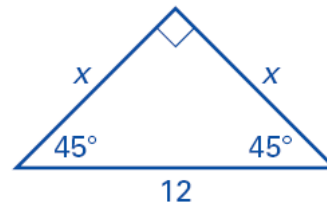


Examples: Find the value of the variables.

1.



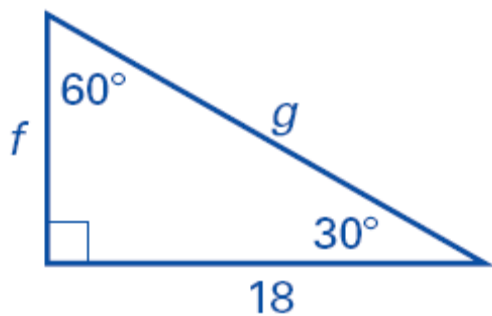
2.



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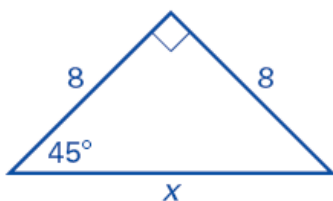
9.4 Notes: Special Right Triangles

3.

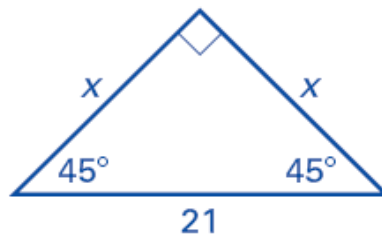


Guided Practice: Find the value of each variable. Express the answer in simplest radical form.

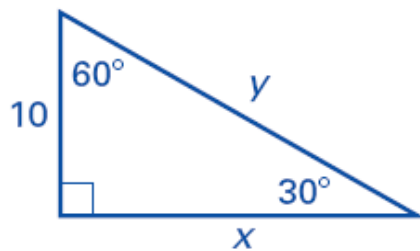
4.



5.



6.



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(pp 551-3)

9.4 Notes: Special Right Triangles

Examples.

7. A ramp is used to unload trucks. How high is the end of a 50 foot ramp when it is tipped by a 30° angle? by a 45° angle?

8. The roof on a doghouse is shaped like an equilateral triangle with height 3 feet. Estimate the area of the cross section of the roof.

Guided Practice.

9. A ramp is used to unload trucks. How high is the end of a 36 foot ramp when it is tipped by a angle 30° ? by a 45° angle?

Geometry 9.4 Notes: Special Right Triangles
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10. An equilateral triangle has side length 8 feet. Estimate the area.

11. Name the angle measures of special right triangles.

12. Find the ratio of the lengths of sides of a $30^\circ - 60^\circ - 90^\circ$ triangle and of a $45^\circ - 45^\circ - 90^\circ$ triangle.